

Savant® 4K HDR HDBaseT Matrix Switcher

Deployment Guide

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This document will guide the installer through the process of installing, configuring, and adding Savant 4K HDR HDBaseT Matrix Switcher to a RacePoint Blueprint™ configuration.

- 4K HDR HDBaseT Matrix Switcher 8x8 [SLN-88VLC4K-xx]
- 4K HDR HDBaseT Matrix Switcher 4x4 [SLN-44VLC4K-xx]
- 4K HDR HDBaseT Matrix Receiver 100m [HRX-4KVLC100-xx]
- 4K HDR HDBaseT Matrix Receiver 40m [HRX-4KVLC40-xx]

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Important Safety Information - Read First



Before installing, configuring, or operating any equipment, Savant recommends that each dealer, integrator, installer, etc. access and read all relevant technical documentation. Savant technical documentation can be located by visiting Savant.com.

Read and understand all safety instructions, cautions, and warnings in this document and the labels on the equipment.


Safety Classifications In this Document

NOTE:	Provides special information for installing, configuring, and operating the equipment.
 IMPORTANT!	Provides special information that is critical to installing, configuring, and operating the equipment.
 CAUTION!	Provides special information for avoiding situations that may cause damage to equipment.
 WARNING!	Provides special information for avoiding situations that may cause physical danger to the installer, end user, etc.

Electric Shock Prevention

 ELECTRIC SHOCK!	The source power poses an electric shock hazard that has the potential to cause serious injury to installers and end users.
 ELECTRICAL DISCONNECT:	The source power outlet and power supply input power sockets should be easily accessible to disconnect power in the event of an electrical hazard or malfunction.

Weight Injury Prevention

 WEIGHT INJURY!	Installing some Savant equipment requires two installers to ensure safe handling during installation. Failure to use two installers may result in injury.
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Safety Statements

All safety instructions below should be read, understood, and applied under all relevant circumstances when working with this equipment.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of any polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If any provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect any power cord from being walked on or pinched; particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Use only attachments/accessories specified by the manufacturer, following all relevant safety precautions for any such attachments/accessories.
12. Disconnect any outlet powered apparatus from its power source during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as a damaged power supply cord or plug, liquid being spilled or objects having fallen into the apparatus, the apparatus being exposed to rain or moisture, apparatus having been dropped, or other failure to operate normally.
14. To completely disconnect equipment from AC mains power, disconnect the power supply cord plug from the AC receptacle.
15. For applicable equipment, use the included power cord with the grounding prong intact to insure proper grounding of the device.
16. For any hardwired or fixed in-wall apparatus, carefully follow all wiring diagrams and instructions. All electrical wiring and servicing should be performed by a properly licensed electrician.

1. Before You Begin

Read this document in its entirety before starting deployment of the product, and ensure that the following required items are available:

- Unique ID (UID) of the Savant 4K HDR HDBaseT Matrix.....
- Savant Development Environment (SDE/MacBook).....
RacePoint Blueprint da Vinci 9.2 or higher.
- Ethernet network meeting Savant requirements.....
See [Appendix: Network Requirements](#)

2. Deployment Steps

To successfully deploy a Savant 4K HDR HDBaseT Matrix Switcher, follow the steps listed below. This page can be used as a checklist to track progress as items are completed.

- Review product specifications and box contents.....
See the device's Quick Reference Guide on the [Savant Customer Community](#).
- Install the Savant 4K HDR HDBaseT Matrix Switcher
See [Installation](#)
- Add the Savant 4K HDR HDBaseT Matrix Switcher into a RacePoint Blueprint™ configuration
See [Blueprint Configuration](#)

3. Wiring and Connections

The subsections below detail the steps for making the necessary connections when installing a Savant 4K HDR HDBaseT Matrix.

3.1. Power



SURGE PROTECTION!

Use a surge-protected circuit for all components and power supplies requiring 120/240V (AC 50/60 Hz) source power.



ELECTRICAL DISCONNECT!

The source power outlet and power supply input power sockets should be easily accessible, to disconnect power in the event of an electrical hazard or malfunction.

3.2. Network Connection

For more information, see [Appendix: Network Requirements](#).

3.3. Audio Connection

- The digital audio outputs are linked to the HDMI input of the same number.
- The Optical Input (TOSLink) support up to 192kHz/24-bit digital audio and up to 5.1 encoded audio.
- Audio connections are pass-through only. For audio down-mixing an external Digital Signal Processor (DSP) is required.

NOTE: If an unsupported audio format is passed either distorted audio will play, or no audio will play.

3.4. HDMI Connection

All HDMI connections are 19-Pin Type A HDMI female digital audio/video ports. Supports HDMI 2.0a. HDMI 2.0 compliant cable is required for 4K content.

HDMI Outputs mirrors HDBaseT output of the same number.

3.5. IR Wiring

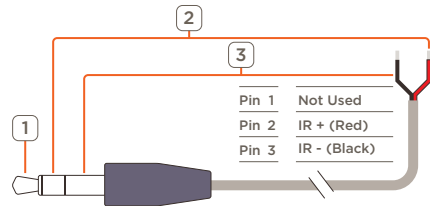
IR control is pass-through only. The IR signal must originate from an external controller, (i.e. SmartControl 12). 3rd party controllers can be used in a non-Savant deployment.



IMPORTANT! When using IR pass-through on the HDBaseT Matrix, the IR connections to the chassis and from the receive boxes do not appear in Blueprint. The connection is made directly from the controller to the device being controlled.

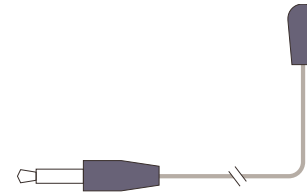
IR Connector Cable

Connect to 3.5 mm IR In on the HDBaseT Matrix to receive the IR control signal from a controller.

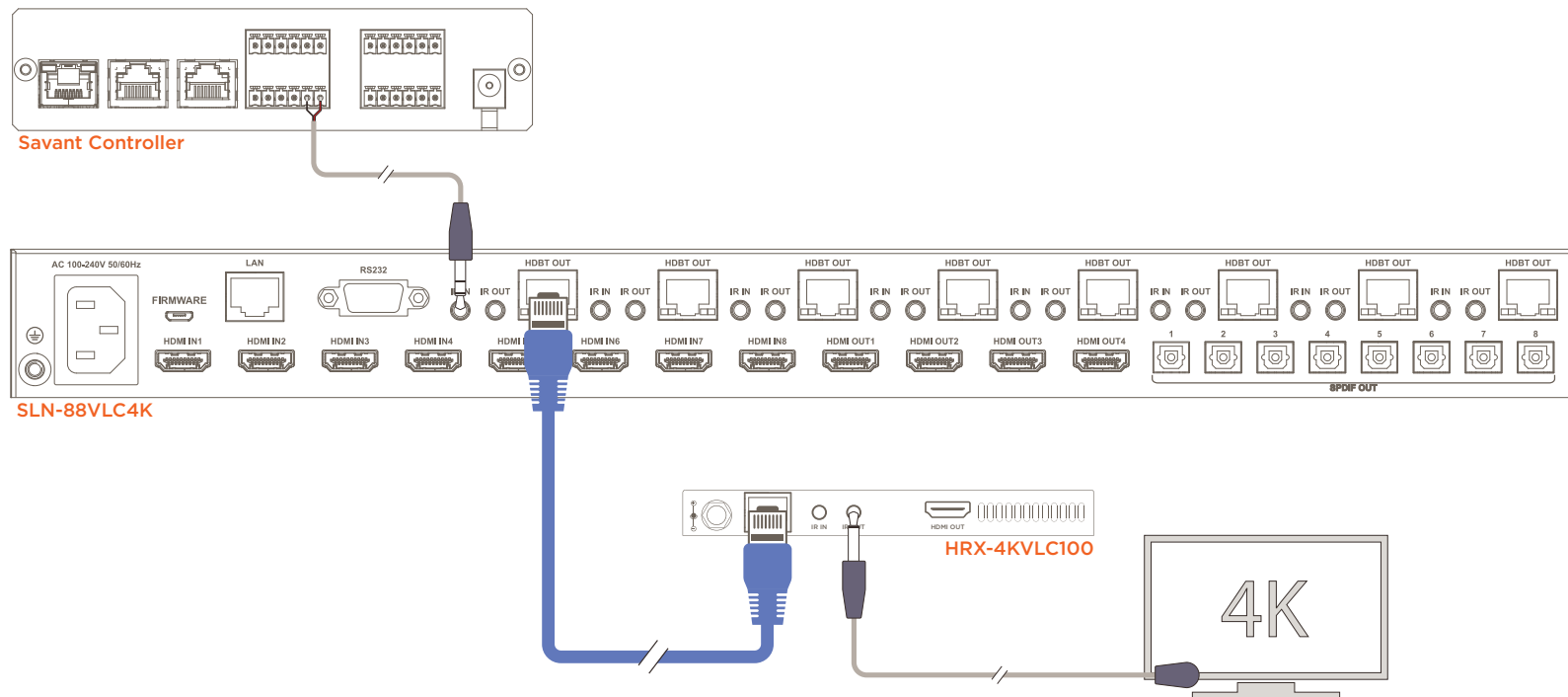


IR Emitter

Connect to an 3.5 mm IR Out on a compatible HDBaseT Receiver to control a IR device.



IR Wiring Diagram

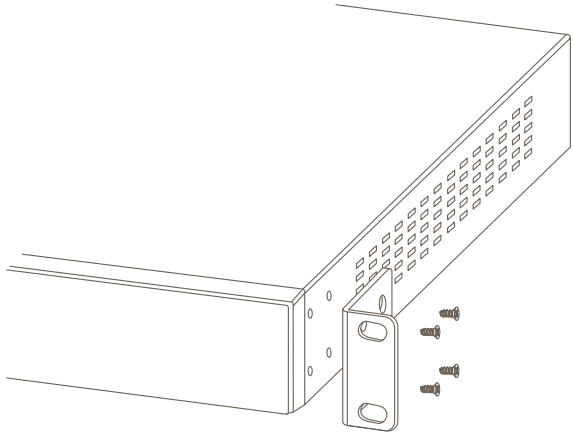


4. Installation

The SLN-xxVLC4K can be mounted in a 1U rack style enclosure, and is compatible with all standard 19-inch National Electrical Manufacturers Association (NEMA) rack mounts.

Follow the steps below to install the mounting brackets:

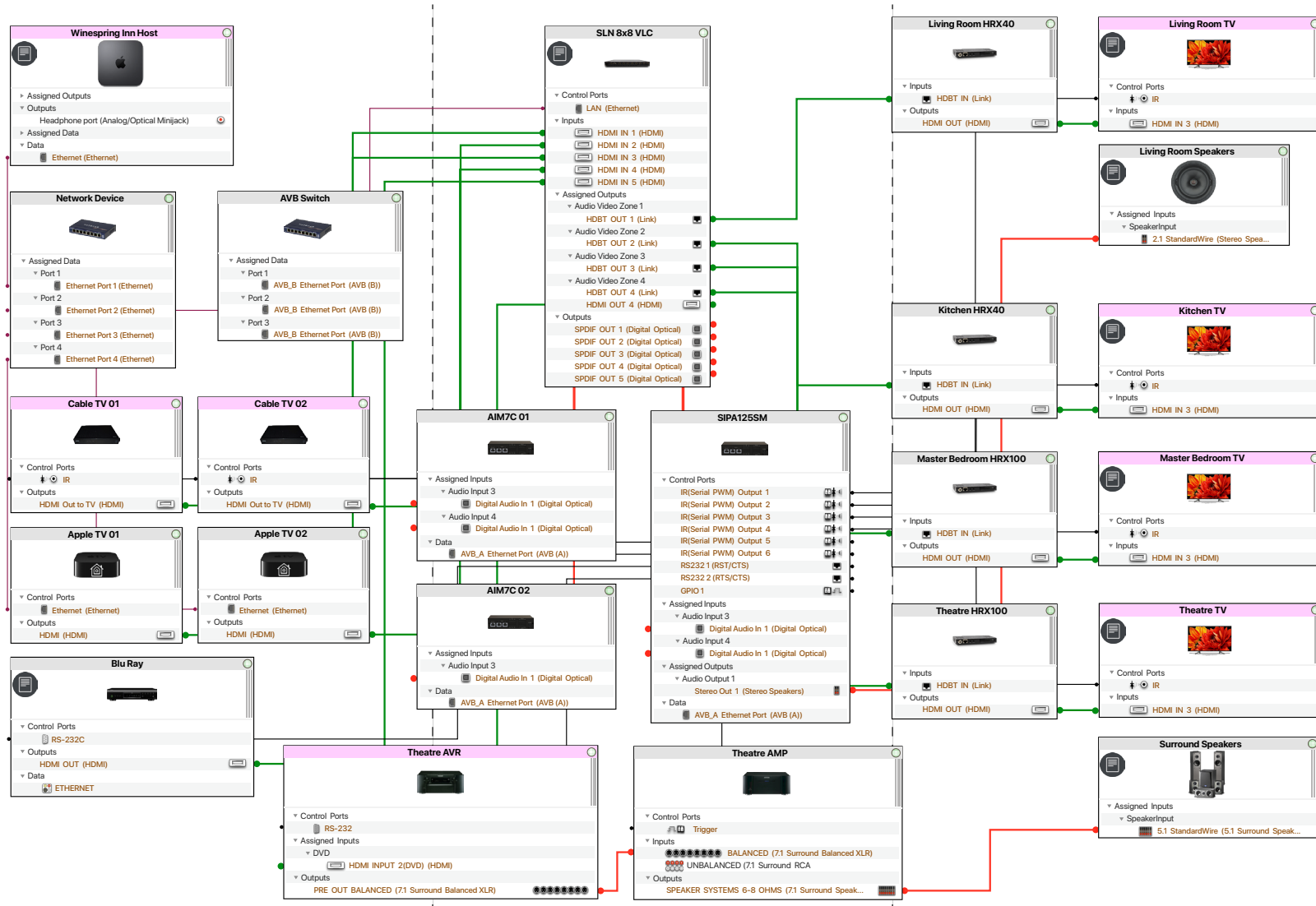
1. Align the mounting bracket with the threaded holes on the side of the unit, as shown below.



2. Secure with the included Bracket Screws.
3. Repeat steps 1 and 2 for the other side of the device.

5. Blueprint Configuration

5.1. Blueprint Example

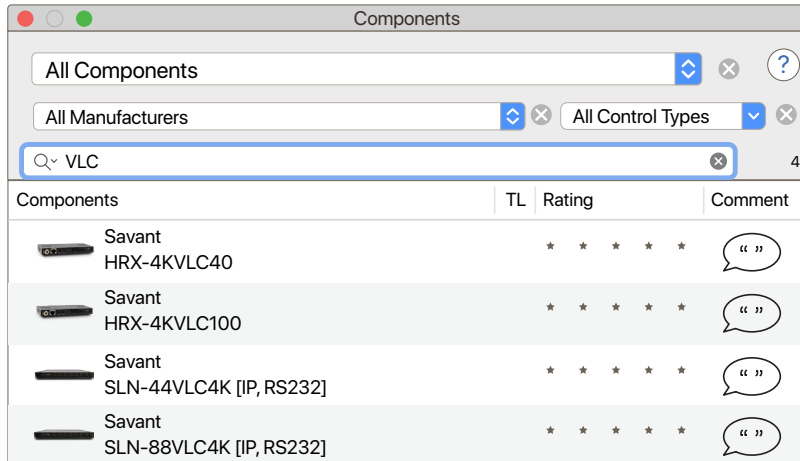


5.2. Adding an SLN-xxVLC4K to a Configuration

To add a SLN Matrix to a Blueprint configuration follow the steps outlines below.

Within the open Blueprint configuration:

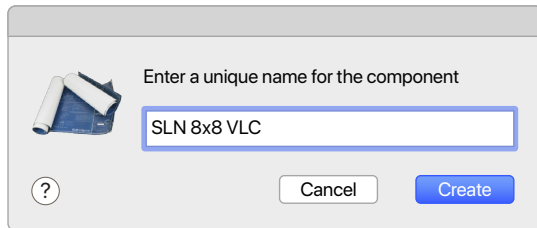
1. Click **Show Library**.
2. Search for **VLC**.



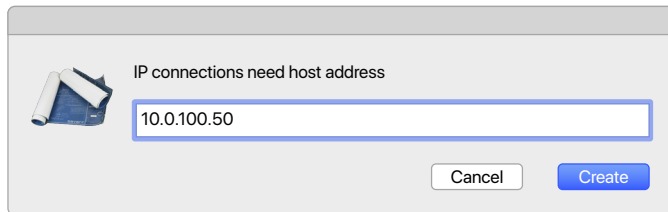
3. Select the desired matrix and drag into a **Shared Equipment** zone.

HELPFUL INFO: Savant recommends placing all A/V switches in a **Shared Equipment** zone. The signal path of any source devices placed within a User zone cannot output to any other zone.

4. Name the device.



5. Place the Matrix in the **Layout** window.
6. Make the Ethernet/Control connection to the Matrix.
7. A pop up window will appear, Enter the **IP address** for the matrix.

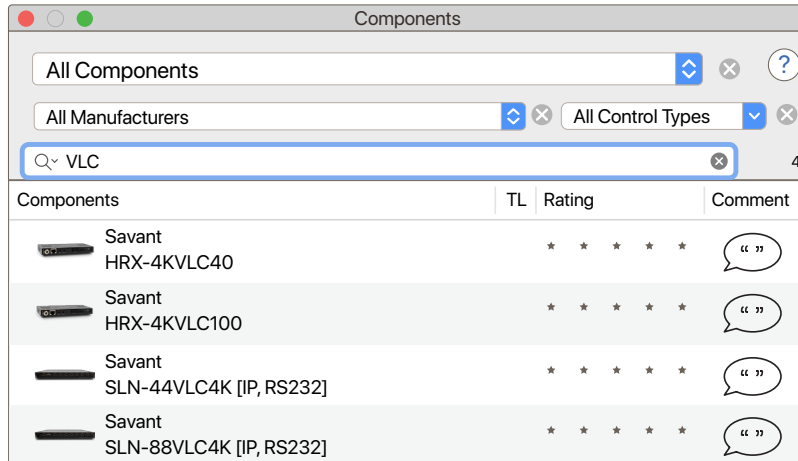


5.3. Adding an HRX-4KVLCxxx to a Configuration

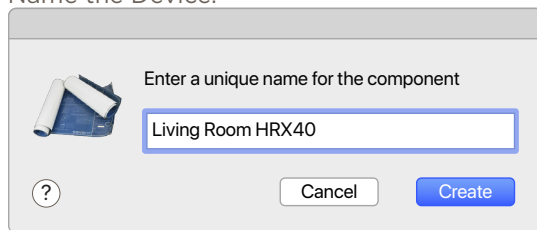
To add an SLN Matrix to a Blueprint configuration, follow the steps outlined below.

Within the open Blueprint configuration:

1. Click **Show Library**.
2. Search for **VLC**.



3. Select the profile matching the unit being installed, and drag into the User Zone.
4. Name the Device.



5. Place the HRX in the **Layout** window.
6. Make HDBaseT/HDMI Connections.

6. Web User Interface (Web UI)

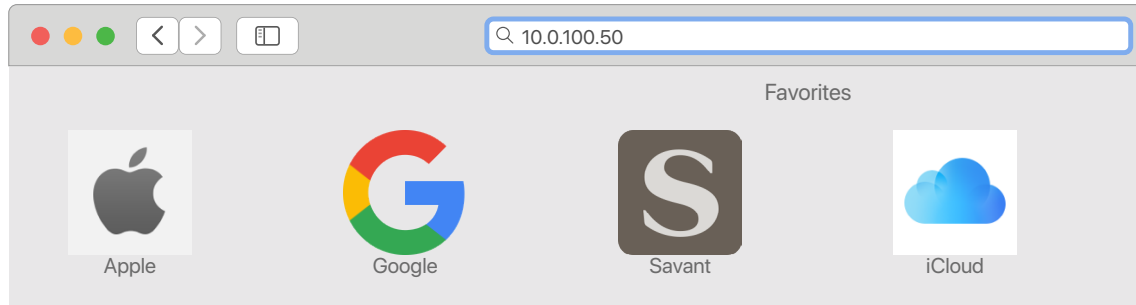
The Savant HDBaseT Matrix has a Web UI, which includes options for a number of device settings, as well as firmware upgrades. This can be especially useful for troubleshooting potential issues in the field.

6.1. Accessing the Web UI

In order to access the Web UI, the IP address of the HDBaseT Matrix is needed. This can be obtained from System Monitor, or any network scanning software.

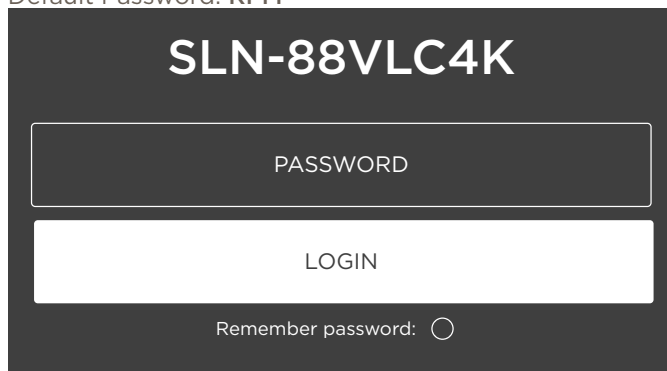
1. On the SDE, open a Web Browser and enter the IP address of the device in the address bar:

Syntax: http://[IP address of Device]



2. Once opened, enter the password:

Default Password: **RPM**



6.2. Status Tab

SAVANT SLN-88VLC4K LOGOUT

STATUS NETWORK LOGGING FIRMWARE INPUT & OUTPUT SETTINGS

STATUS

- A** IP Address
10.0.100.50
- B** Firmware Version
V2.6
- C** Uptime
0 day 0 hour 23 minutes
- D** RESTART

A	IP address	Currently assigned IP address.
B	Firmware Version	Current Firmware Version number.
C	Uptime	Amount of time the unit has been powered without a restart.
D	Restart	Restarts the software of the unit.

6.3. Network Tab

A	IP address Configuration	DHCP (Dynamic Host Configuration Protocol) or Static.
B	IP address	Displays the current IP address and allows for manual entry of a Static IP address. This is automatically assigned when item A is set to DHCP.
C	Subnet Mask	Subnet mask of the network. This is automatically assigned when item A is set to DHCP.
D	Default Gateway	IP address of the network router. This is also known as Gateway or Default Gateway.
E	Apply	Select to apply entered settings, and restart the device.
F	Old Password	To change the device's login password, enter the current password here.
G	New Password	Enter a new device password. Enter the same password in the Confirm New Password field below.
H	Save	With all three of the password change fields described above completed, select Save to finalize the new password.

6.4. Logging Tab

The Logging Tab displays the contents of the active log file. This is helpful when troubleshooting.



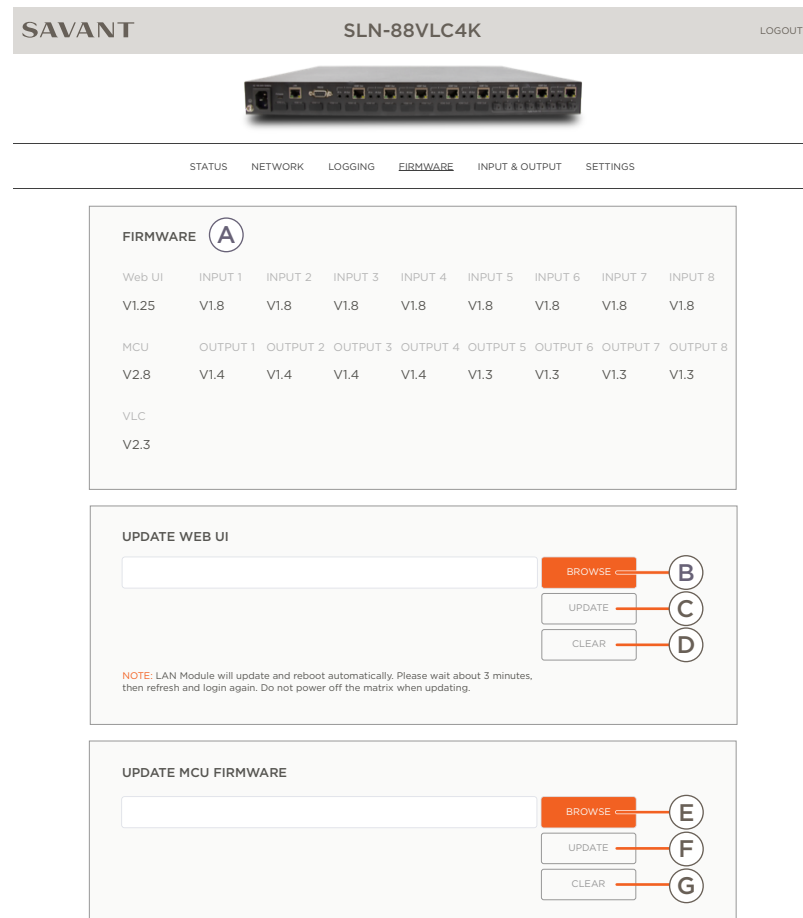
The screenshot shows the web interface for a SAVANT SLN-88VLC4K device. At the top, there is a header with the SAVANT logo, the device model SLN-88VLC4K, and a LOGOUT button. Below the header is a navigation menu with tabs for STATUS, NETWORK, LOGGING (which is selected), FIRMWARE, INPUT & OUTPUT, and SETTINGS. The main content area displays a list of log entries:

- 16:07:29 Receive : IPADDRESS STATIC IP4ADDR 10.0.100.50 NETMASK 255.255.255.0 GATEWAY 10.0.100.1
- 16:07:29 Send : GET IPADDRESS
- 16:07:26 Receive : VER SLN-88VLC4K 2.6
- 16:07:26 Receive : VLC ("VER": "2.3")
- 16:07:26 Receive : WEBUI VERSION V1.23
- 16:07:26 Receive : STATUSINFO 10.0.100.50 1499
- 16:07:26 Receive : MATRIXINFO MX0808-1021-D50

At the bottom of the log entries, there is a [SHOW MORE](#) link.

6.5. Firmware Tab

This section is an overview of the Firmware tab in the Web-UI. For more information on updating the firmware of the Matrix see the [Firmware Update](#) section below.



SAVANT SLN-88VLC4K LOGOUT

STATUS NETWORK LOGGING **FIRMWARE** INPUT & OUTPUT SETTINGS

FIRMWARE (A)

Web UI	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5	INPUT 6	INPUT 7	INPUT 8
V1.25	V1.8	V1.8	V1.8	V1.8	V1.8	V1.8	V1.8	V1.8

MCU	OUTPUT 1	OUTPUT 2	OUTPUT 3	OUTPUT 4	OUTPUT 5	OUTPUT 6	OUTPUT 7	OUTPUT 8
V2.8	V1.4	V1.4	V1.4	V1.4	V1.3	V1.3	V1.3	V1.3

VLC
V2.3

UPDATE WEB UI

BROWSE (B)

 (C)

 (D)

NOTE: LAN Module will update and reboot automatically. Please wait about 3 minutes, then refresh and login again. Do not power off the matrix when updating.

UPDATE MCU FIRMWARE

BROWSE (E)

 (F)

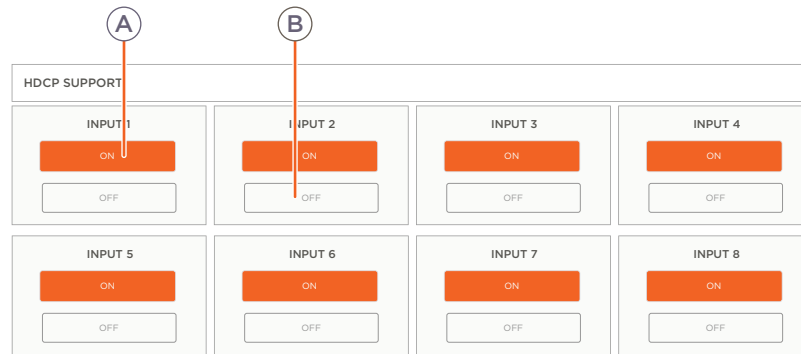
 (G)

- (A) Current Firmware Current MCU firmware version. The firmware version is listed for the MCU, Web UI, VLC, Inputs, and Outputs
- (B) Browse Web UI Firmware File Select to browse for the Web UI firmware file.
- (C) Update Web UI Firmware Select to update the matrix Web UI firmware.
- (D) Clear Selected Web UI Firmware File Clears the selected Web UI firmware file.
- (E) Browse MCU Firmware File Select to browse for the MCU firmware file.
- (F) Update Web UI Firmware Select to update the matrix MCU firmware.
- (G) Clear Selected Web UI Firmware File Clears the selected MCU firmware file.

6.6. Inputs & Outputs Tab

HDCP Support

HDCP stands for “High-bandwidth Digital Content Protection”. HDCP may need to be disabled temporarily for certain signal troubleshooting applications.

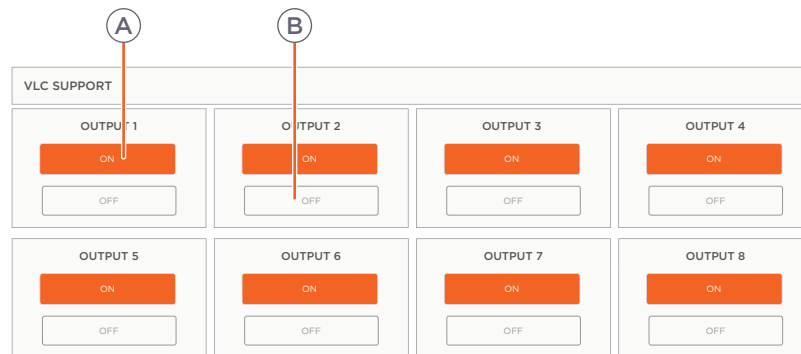


A On Turns On HDCP support for the selected input port.

B Off Turns Off HDCP support for the selected input port.

VLC Support

VLC stands for “Very Light Compression”. This is used by the matrix when the bandwidth required goes above 10.2 Gbps. VLC can be disabled for troubleshooting purposes, however if VLC is not active and the required bandwidth exceeds 10.2 Gbps, video will not be passed.



A On Turns On VLC support for the selected input port.

B Off Turns Off VLC support for the selected input port.

Input & Output

VIDEO SWITCH									
INPUT/OUTPUTS	Output 1 STATUS	Output 2 STATUS	Output 3 STATUS	Output 4 STATUS	Output 5 STATUS	Output 6 STATUS	Output 7 STATUS	Output 8 STATUS	All
Input 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Input 2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Input 3	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Input 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Input 5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Input 6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Input 7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Input 8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

A	Input List	List of all the available inputs.
B	Output List	List of all the available outputs.
C	Status Button	Brings up the status information for the selected output. See the Output Status section below for more information.
D	Active/Activate Connection	Indicates an active connection; also can be used to make an active connection by clicking the check box for the Input/Output combination. NOTE: The None row at the bottom can be used to break all active connections to a given output.
E	Connect All	Connects all outputs to the selected input row.

Output Status

Output 1 Status ✕

HDBaseT Mode HDBaseT

Cable Length <72.18 ft (22m)

Display Name LG 65UJ6540

Display Connected Yes

Display Powered On Yes

Local Firmware 1.30.72.110 Update

Remote Firmware 2.30.72.100 Update

Overall Link Quality -23dB -21dB -21dB -21dB

Link Test Start

HDMI Mode Disconnected

Display Name

Display Connected No

Display Powered On No

HDBaseT Mode: Shows whether or not an HDBaseT receiver is connected and being used.

Cable Length: Estimated cable length in feet and meters between the matrix and HDBaseT receiver.

Display Name: Displays the name from the display connected to the output receiver.

Display Connected: Shows whether or not the display is currently connected to the receiver. (Yes or No)

Display Powered On: Shows whether or not the display is currently powered on. (Yes or No)

Local Firmware: Displays the current HDBaseT firmware for the matrix, and a button to update the firmware when available.

Remote Firmware: Displays the current HDBaseT firmware for the connected receiver, and a button to update the firmware when available.

Over Link Quality: Displays the current link quality for the 4 HDBaseT channels.

Link Test: Runs a test of the HDBaseT link and display status of the results.

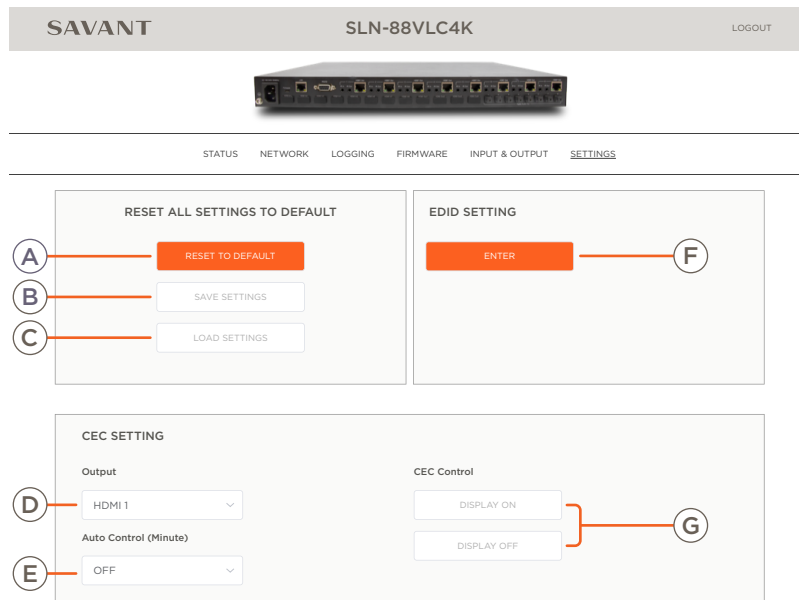
HDMI Mode: Shows whether or not an HDBaseT receiver is connected and being used.

Display Name: Displays the name of the display connected to the output receiver.

Display Connected: Shows whether or not the display is currently connected to the HDMI output.

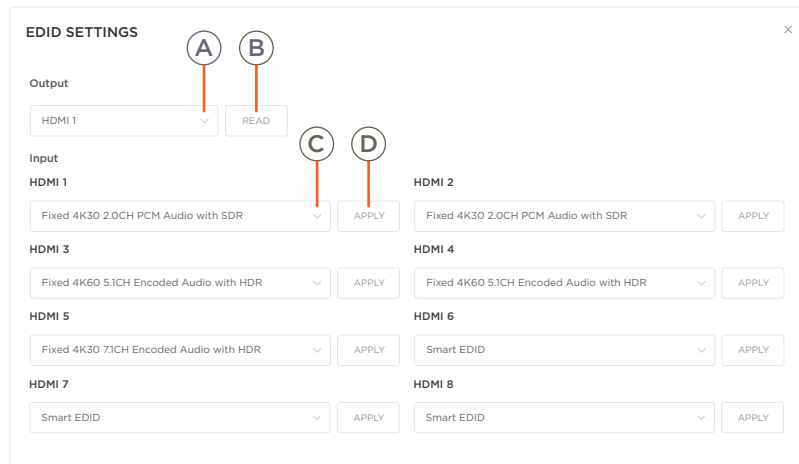
Display Powered On: Shows whether or not the display is currently powered on.

6.7. Settings Tab



(A) Reset to Default	Clears all settings and resets the device to its factory defaults.
(B) Save Settings	Collects all settings and allows a text file to be saved. This can be used as a backup or to be deployed at a different location.
(C) Load Settings	Loads settings from a saved text file.
(D) Output Selection	Selects the output for configuration and control.
(E) Audio Control (Minute)	Select a time in minutes after which a Power Off command will be sent to the display if no video signal is detected. When OFF is selected, no such command will be issued.
(F) Enter EDID Settings	Opens the EDID settings menu. See the EDID Settings section below for details.
(G) CEC Control	Buttons to power on or off the connected display.

EDID Settings



(A) Output Selection	Drop-down menu to select output.
(B) View EDID read	Displays the actual EDID read for the selected output. See the example EDID read below.
(C) Input EDID Selection	Drop-down menu to select the desired EDID. See list of available EDID below.
(D) Apply	Applies the change to the input's EDID from the EDID selection.

Example EDID Read

This image shows the raw data of an EDID read. This is useful information when troubleshooting. The Save As button will save a .bin file with the displayed data.

EDID DISPLAY ×

#	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
1	00	ff	ff	ff	ff	ff	ff	00	4d	d9	03	c6	01	01	01	01
2	01	19	01	03	80	5f	36	78	0a	0d	c9	a0	57	47	98	27
3	12	48	4c	21	08	00	81	80	a9	c0	71	4f	b3	00	01	01
4	01	01	01	01	01	01	02	3a	80	18	71	38	2d	40	58	2c
5	45	00	b8	17	31	00	00	1e	01	1d	00	72	51	d0	1e	20
6	6e	28	55	00	b8	17	32	00	00	1e	00	00	00	fc	00	41
7	52	54	49	53	4f	4e	20	42	2e	50	0a	20	00	00	00	fd
8	00	30	3r	0e	46	3c	00	0a	20	20	20	20	20	20	01	20
9	02	03	51	f0	5b	61	60	5d	5e	5f	62	1f	10	14	05	15
10	04	20	22	3c	3e	12	16	03	07	11	15	02	06	01	65	66
11	2c	09	07	07	15	07	50	3d	1f	c0	0d	07	07	83	03	00
12	00	6e	03	0c	00	42	00	b8	3c	2f	00	80	01	02	03	04
13	67	d8	5d	c4	01	78	80	01	e2	00	f9	e5	0f	03	00	00
14	06	01	1d	80	18	71	1c	16	20	58	2c	25	00	b8	17	32
15	00	00	9e	00	00	00	00	00	00	00	00	00	00	00	00	00
16	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	10

SAVE AS

Available EDIDs

Fixed

- Fixed 4K60 7.1CH Encoded Audio with HDR
- Fixed 4K60 5.1CH Encoded Audio with HDR
- Fixed 4K60 2.0CH Encoded Audio with HDR
- Fixed 4K60 7.1CH Encoded Audio with SDR
- Fixed 4K60 5.1CH Encoded Audio with SDR
- Fixed 4K60 2.0CH Encoded Audio with SDR
- Fixed 4K30 7.1CH Encoded Audio with HDR
- Fixed 4K30 5.1CH Encoded Audio with HDR
- Fixed 4K30 2.0CH Encoded Audio with HDR
- Fixed 4K30 7.1CH Encoded Audio with SDR
- Fixed 4K30 5.1CH Encoded Audio with SDR
- Fixed 1080p@60Hz 2.0CH Encoded Audio with SDR
- Fixed 1080p@60Hz 7.1CH Encoded Audio with HDR
- Fixed 1080p@60Hz 5.1CH Encoded Audio with HDR
- Fixed 1080p@60Hz 2.0CH Encoded Audio with HDR
- Fixed 1080p@60Hz 7.1CH Encoded Audio with SDR
- Fixed 1080p@60Hz 5.1CH Encoded Audio with SDR
- Fixed 1080p@60Hz 2.0CH Encoded Audio with SDR

Copy - Copy an EDID from a connected HDBT or HDMI output and write it to the input.

Smart EDID - Allows the switch to automatically determine and limit the output of the connected source on the fly to the lowest audio and video capabilities of all of the connected displays/AVR's.

For example, if you have a 4K source connected to the input and you are routing it to a 4K Display and a 1080p display. The switch will determine that the highest compatible resolution that is supported by both of the displays is 1080p.

If the 1080p display is powered off and only the input source is only being routed to a 4K display, the 4K compatible EDID will be written on the fly to the input and the source will now output 4K video.

EDID Write - Allows an EDID .bin file that was saved from an output port to be written to the selected input.

7. Firmware Update

Firmware updates for the SLN Matrix are done within its Web UI. The firmware package is downloaded as a single package. Follow the steps outlined in the subsections below to download the package, then install the applicable updates to the Web UI and MCU.

IMPORTANT INFO!

- Order of install is very important. The firmware packages are dependent on each other, the Web UI's firmware update must be done before the MCU, and then the HDBaseT firmwares.
- DO NOT reboot/power cycle the matrix while a firmware is being installed.
- This entire process can take two hours or more to complete.
- Savant recommends to have the Savant Deployment Environment (SDE) using a wired network connection. Using a wireless connection will make the process take longer.

7.1. Download Package

The firmware package is downloaded from the product page on the Savant Store.

From a open web browser following these steps:

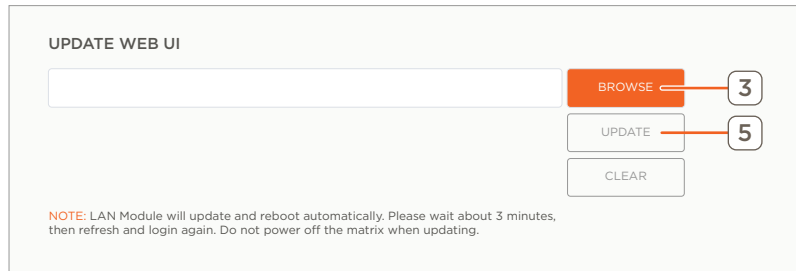
1. Navigate to the [Savant Store](#).
2. Search for the SLN Matrix.
3. Scroll down to the Product Documentation section.
4. Click on the Firmware Package to download it.
This will download a ZIP file containing all the required firmware files.
5. Uncompress the zip file.



TIP: Savant recommends unzipping the file to the desktop for convenience.

7.2. Web UI Firmware

1. Enter the IP address of the matrix into the address bar of a web browser and log in to the Web UI.
Example: http://10.0.100.50
2. Select the Firmware tab and scroll down to the Update Web UI section.
3. Click the **Browse** button.



UPDATE WEB UI

BROWSE 3

UPDATE 5


CLEAR

NOTE: LAN Module will update and reboot automatically. Please wait about 3 minutes, then refresh and login again. Do not power off the matrix when updating.

4. Browse to the **SLN-xxVLC4K-WebUI-Vx.xx+x.bin** Web UI firmware file, located in the unzipped firmware package folder downloaded in the previous subsection.
5. Once the firmware file is chosen, select the **Update** button.
6. The switch will then complete the firmware update process and restart. The process will take approximately 3-5 minutes. When completed, refresh the Web UI page and log back in.

7.3. MCU Firmware

1. Enter the IP address of the matrix into the address bar of a web browser and log in to the Web UI.
Example: http://10.0.100.50
2. Select the **Firmware** tab and scroll down to the Update MCU Firmware section.
3. Click the **Browse** button.



UPDATE MCU FIRMWARE

BROWSE 3

UPDATE 5

CLEAR

4. Browse to the **SLN-xxVLC4K-Vx.x-McuUpdate.tar.gz** MCU firmware file, located in the unzipped firmware package folder downloaded in the previous subsection.
5. Once the firmware file is chosen, select the Update button.
6. The switch will then complete the firmware update process and restart.

7.4. HDBaseT Firmwares

The Matrix and HDBaseT Receivers connected to the Matrix are updated via the Output Status menu, found on the Web UI's Input and Output screen.

Local Firmware

1. Enter the IP address of the matrix into the address bar of a web browser and log in to the Web UI.
Example: http://10.0.100.50.
2. Select the **Input & Output** tab, and scroll down to the Video Switch section.
3. Click Status next to the output to update.

3

VIDEO SWITCH									
INPUT/OUTPUTS	Output 1 STATUS	Output 2 STATUS	Output 3 STATUS	Output 4 STATUS	Output 5 STATUS	Output 6 STATUS	Output 7 STATUS	Output 8 STATUS	All
Input 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Input 2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Input 3	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. In the open Output window, select the **Update** button next to the Local Firmware field.

Output 1 Status

HDBaseT Mode HDBaseT

Cable Length <72.18 ft (22m)

Display Name LG 65UJ6540

Display Connected Yes

Display Powered On Yes

Local Firmware 1.30.72.110 **Update**

Remote Firmware 2.30.72.100 **Update**

Overall Link Quality -23dB -21dB -21dB -21dB

Link Test **Start**

4

5. Select the local VS100TX_XXXXX-x.Hex firmware file.
6. Click Open.
7. Allow approximately 5 minutes for the update process to complete.
8. Repeat this process for all of the HDBaseT outputs on the switch.

Remote Firmware

1. Enter the IP address of the matrix into the address bar of a web browser and log in to the Web UI.
Example: http://10.0.100.50.
2. Select the Input & Output tab, and scroll down to the Video Switch section.
3. Click **Status** next to the output to update.

3

VIDEO SWITCH									
INPUT/OUTPUTS	Output 1	Output 2	Output 3	Output 4	Output 5	Output 6	Output 7	Output 8	All
	STATUS	STATUS	STATUS	STATUS	STATUS	STATUS	STATUS	STATUS	
Input 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Input 2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Input 3	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. In the open Output window, select the Update button next to the Remote Firmware field.

Output 1 Status

HDBaseT Mode HDBaseT

Cable Length <72.18 ft (22m)

Display Name LG 65UJ6540

Display Connected Yes

Display Powered On Yes

Local Firmware 1.30.72.110 Update

Remote Firmware 2.30.72.100 Update

Overall Link Quality -23dB -21dB -21dB -21dB

Link Test Start

4

5. Select the remote **VSxxxRX_XXXXX-x.Hex** firmware file.
6. Click **Open**.
7. Allow approximately 5 minutes for the update process to complete.
8. Repeat this process for all of the HDBaseT receivers.

Appendix A: Network Requirements

Savant requires the use of business class/commercial grade network equipment throughout the network to ensure the reliability of communication between devices. These higher quality components also allow for more accurate troubleshooting when needed.

Device Network Connections

Connect all Savant devices to the same local area network (LAN) or subnet as the Host. Savant recommends not implementing any type of traffic management, packet shaping, band steering, QoS or similar features within the network topology for Savant devices, as this may interfere with performance.

Managing IP Addresses

To ensure that the IP address will not change due to a power outage, a static IP address or DHCP reservation should be configured. Savant recommends using DHCP reservation within the router. By using this method, IP addresses for all devices can be managed from a single UI, eliminating the need to access devices individually.

Setting a Static IP Address

Setting a Static IP address can be done from the Network tab of the Web UI.

Setting DHCP Reservation

Setting DHCP reservation varies from router to router. Refer to the documentation for the router to configure DHCP reservation.

Network Changes

Savant recommends performing one of the following steps to refresh the IP connection after connecting to a new network, changing routers, or if the IP address range is changed in the current router. This will reset any IP connection and ensure that the Host is communicating with the network correctly.

Cycle Power

- Disconnect the device from the power source.
- Wait 15 seconds and then reconnect.

Hot Plug the Ethernet (LAN) Connection

- Disconnect the Ethernet (LAN) connection from the device.
- Wait 15 seconds and then reconnect.

Appendix B: System States

The Savant 4K HDR HDBaseT Matrix Switcher provides a large amount of data that is parsed by the Host and displayed in System Monitor under the **System States** section. Below is a image of System Monitor showing an example of some of this data.

The screenshot shows the System Monitor interface for a host named 'Winespring Inn - 10.0.100.25 (Host)'. The system status is 'Online'. The interface is divided into a left sidebar and a main content area. The sidebar contains sections for GENERAL, CONTROL, and A/V, with 'System State' selected under CONTROL. The main content area displays 'State Values' in a table and 'State Receivers' in a list.

System Status: Online

GENERAL

- System Dashboard
- Controller Info
- Processes
- Diagnostic Reports
- System Licenses
- Configuration Info
- Host Claiming

CONTROL

- System State**
- Service Events
- Services
- Component Status

A/V

- Audio Controls
- Video Controls
- AV Connections
- EDID Settings
- Sonos Info

State Values

State Name	State Value
SLN_44VLC4K.AV Switch 2.CurrentPowerStatus	OFF
SLN_44VLC4K.AV Switch 2.IsPowered	0
SLN_44VLC4K.AV Switch 3.CurrentPowerStatus	OFF
SLN_44VLC4K.AV Switch 3.IsPowered	0
SLN_44VLC4K.AV Switch 4.CurrentPowerStatus	OFF
SLN_44VLC4K.AV Switch 4.IsPowered	0
SLN_44VLC4K.AV Switch.CurrentAspectRatio_HDMIin4	16:9
SLN_44VLC4K.AV Switch.CurrentAudioSamplingRate_HDMIin4	48KHz
SLN_44VLC4K.AV Switch.CurrentColorDepth_HDMIin4	24_bit
SLN_44VLC4K.AV Switch.CurrentColorSpace_HDMIin4	YUV444
SLN_44VLC4K.AV Switch.CurrentFirmwareVersion	SLN-44VLC4K V2.9
SLN_44VLC4K.AV Switch.CurrentFrameRate_HDMIin4	60Hz
SLN_44VLC4K.AV Switch.CurrentHardwareVersion	SLN-44VLC4K HW0.2
SLN_44VLC4K.AV Switch.CurrentHDCPCCompliance_HDMIin4	HDCP 1.4
SLN_44VLC4K.AV Switch.CurrentInput	HDMI In 1
SLN_44VLC4K.AV Switch.CurrentPCMpresence_HDMIin4	PCM
SLN_44VLC4K.AV Switch.CurrentPowerStatus	ON
SLN_44VLC4K.AV Switch.CurrentResolution_HDMIin4	1920*1080
SLN_44VLC4K.AV Switch.IsPowered	1

State Receivers

- soap.udp://127.0.0.1:53958
- soap.udp://127.0.0.1:63960
- soap.udp://127.0.0.1:60043
- soap.udp://127.0.0.1:57279
- soap.udp://127.0.0.1:59164
- soap.udp://127.0.0.1:55973
- soap.udp://127.0.0.1:61696

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